

Reply to Notice of Non-Compliant Amendment dated 6/09/04

AMENDMENTS TO THE CLAIMS

Please amend the claims of the present application as set forth below

- 5 1. (Cancelled).
2. (Cancelled).
3. (Cancelled).
- 10 4. (Previously presented) A method of fabricating a slot in a print head substrate, comprising:
- dry etching through a first surface of the substrate having a thickness between the first and a second opposing surfaces, wherein said dry etching
- 15 removes about 50 percent of the thickness of the substrate; and,
- sand drilling through the second surface of the substrate effective to form, in combination with said etching, a slot at least a portion of which passes entirely through the thickness of the substrate.
- 20 5. (Cancelled).
6. (Cancelled).
7. (Cancelled).
- 25 8. (Cancelled).
9. (Cancelled).

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10. (Currently amended) A method of forming fluid handling slots in a semiconductor substrate having a thickness between opposing first and second surfaces comprising:

5       dry etching into the substrate from the first surface to form a first trench having a trench length and a trench width; and,

          removing substrate material through the second surface to form a second trench, wherein at least a portion of the first and second trenches intersect to form a slot through the substrate, and wherein the slot has a maximum slot width  
10 measured parallel to the first surface that is less than one half of the thickness—~~an aspect ratio of greater than or equal to about 3.~~

11. (Original) The method of claim 10, wherein said removing comprises one or more of: sand drilling, laser machining, dry etching, wet etching, and  
15 mechanical drilling.

12. (Original) The method of claim 10, wherein said act of dry etching is performed before said act of removing.

20 13. (Original) The method of claim 10, wherein said dry etching comprises multiple acts of dry etching, wherein subsequent individual acts of dry etching remove shorter lengths of substrate than previous individual acts of dry etching.

14. (Currently Amended) The method of claim 10, wherein the second trench  
25 formed by said removing has a maximum second trench width of less than or equal to about 240 microns.

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15. (Currently Amended) The method of claim 10, wherein the second trench formed by said removing has a maximum second trench width of about 50 percent or less the thickness of the substrate.
- 5 16. (Original) The method of claim 10, wherein the second trench formed by said removing has a length at a region where breakthrough occurs that is approximately equal to the maximum length of the first trench
- 10 17. (Original) The method of claim 10, wherein the second trench formed by said removing has a length at a region where breakthrough occurs that is about 25 percent to about 75 percent the length of the first trench where the trenches intersect to form the slot.
- 15 18. (Original) The method of claim 10, wherein the first trench formed by said dry etching has a depth of about 25 percent to about 75 percent of the thickness of the substrate.
- 20 19. (Original) The method of claim 10, wherein the second trench formed by said removing has a maximum width of less than or equal to about 300 percent the maximum width of the first trench formed by said dry etching.
20. (Cancelled).
- 25 21. (Original) A method of forming slots in a semiconductor substrate having first and second opposing surfaces comprising:  
dry etching a first trench through the first surface of the substrate; and,  
creating a second trench through the second surface of the substrate effective to form, in combination with the first trench, a slot at least a portion of

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which passes entirely through the substrate, wherein the maximum width of the slot is less than or equal to about 50 percent of the thickness of the substrate..

22 (Original) The method of claim 21, wherein said creating a second trench  
5 comprises sand drilling.

23. (Original) The method of claim 21, wherein said creating a second trench comprises wet etching, dry etching, mechanical drilling, or laser machining.

10 24. (Original) The method of claim 21, wherein said dry etching comprises dry etching into a thin film side.

25. (Original) The method of claim 21, wherein said dry etching and said creating form a slot having a configuration that reduces bubble accumulation.

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26. (Original) The method of claim 21, wherein said act of dry etching is performed prior to said act of creating.

27. (Cancelled).

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